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Litigating Against the Artificially Intelligent Infringer

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LITIGATING AGAINST THE ARTIFICIALLY INTELLIGENT INFRINGER[‡]

Yvette Joy Liebesman*
Julie Cromer Young**

ABSTRACT

Many scholars have posited whether a computer possessing Artificial Intelligence (AI) could be considered an author as defined per the Copyright Act of 1976. What was once a thought experiment is now approaching reality. The focus has primarily been on whether an AI meets the requirements from a purely objective legal framework, or whether an AI could be an author based on the doctrines of incentives, independent creation, and creativity.

However, another feature of authorship is the ability to be held liable if that author's expressive work is infringing on another's. When contemplating whether an AI—or any non-human—can be an author, then part of that determination should be to consider whether the being in question that created the work can be held liable as an infringer, and, as a logical extension, whether that being can in fact be sued. This involves considering issues from the theoretical, like civil procedure and remedies, to the practical, such as legal representation and discovery. How is an AI served with a lawsuit? What would be an adequate, enforceable remedy for an AI's infringement? Is an AI even bound by our laws?

This morass of legal headaches goes beyond any doctrinal issues regarding authorship and provides ample reason to keep legal authorship in the hands of humans or entities controlled by humans.

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[‡] This article is adapted from a talk given at the Florida International University College of Law (presented by Prof. Liebesman on November 8, 2019) and is based on a forthcoming article in Volume 69 of the University of Kansas Law Review coauthored by Professors Liebesman and Cromer Young, which expands in greater depth the issues raised herein.

* Professor of Law, Saint Louis University School of Law. I would like to thank my coauthor as well as the Editors of the *FIU Law Review* for their kind invitation to speak at their symposium on law, ethics, and business of data and artificial intelligence in the media and entertainment industries.

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I. INTRODUCTION

Over the years, what had once been a thought experiment has now approached reality. Smart computers possessing the ability to learn have gone far beyond the depiction of the nuclear war-starting WOPR that learns that playing tic-tac-toe is futile.¹ Now, algorithms are responsible for determining users' entertainment preferences,² shopping habits,³ and typical calendar.⁴ Smart phones already suggest email language based on the user's previous texts and messages.⁵ Before long, the writing suggestions will be longer, and the subject matter will undoubtedly become more comprehensive.

¹ WARGAMES (MGM 1983).

² See Alice Williams, *3 Ways Artificial Intelligence Is Turning Entertainment on Its Head*, KSL (Apr. 19, 2017), <https://www.ksl.com/article/43925538/3-ways-artificial-intelligence-is-turning-entertainment-on-its-head>.

³ See, e.g., U.S. Patent No. 7,028,894 (issued on Apr. 18, 2006); Christine Persaud, *How AI Will Change Your Shopping Habits*, FUTURITHMIC (Mar. 18, 2019), <https://www.futurithmic.com/2019/03/18/how-ai-will-change-your-shopping-habits/>; Anna Schaverien, *How Retailers Can Adapt to A.I. and the Future of Shopping*, FORBES (Mar. 18, 2019), <https://www.forbes.com/sites/annaschaverien/2019/03/18/ey-future-of-shopping-retail-ai-artificial-intelligence/#c7c4e2f4a159>.

⁴ See, e.g., Jared Newman, *Woven Is a Calendar Assistant You Might Actually Use*, FAST COMPANY (Nov. 8, 2018), <https://www.fastcompany.com/90264212/woven-is-a-calendar-assistant-you-might-actually-use>.

⁵ See, e.g., Anne McCarthy, *How Smart Email Could Change the Way We Talk*, BBC (Aug. 12, 2019), <https://www.bbc.com/future/article/20190812-how-ai-powered-predictive-text-affects-your-brain>; Alison DeNisco Rayome, *Gmail's Smart Reply Is an Example of What Real AI Will Look Like for Frontline Workers*, TECH REPUBLIC (Sept. 21, 2018), <https://www.techrepublic.com/article/gmails-smart-reply-is-an-example-of-what-real-ai-will-look-like-for-frontline-workers/>.

Many scholars⁶ have posited whether a computer possessing Artificial Intelligence (AI)⁷ could be considered an author as defined per the Copyright Act of 1976.⁸ The focus of these scholars has primarily been on whether an AI met the requirements from a purely objective, legal framework, to be an author based on the doctrines of incentives,⁹ independent creation,¹⁰ and creativity.¹¹ These scholars have argued both in favor and against an AI's authorship.¹²

However, another feature of authorship is the ability to be held liable if that author's expressive work is infringing on another's.¹³ When contemplating whether an AI—or any non-human—can be an author under copyright law, then part of that examination should be whether the AI which created the work can be held liable as an infringer of copyright. To date, when AI-based copying has been the basis for an infringement lawsuit, either a human or corporate owner, has been the defendant—not the AI itself. For

⁶ See, e.g., Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 STAN. TECH. L. REV. 5, 5 (2012); Nina I. Brown, *Artificial Authors: A Case for Copyright in Computer-Generated Works*, 20 COLUM. SCI. & TECH. L. REV. 1, 1 (2018); Yvette Joy Liebesman, *The Wisdom of Legislating for Anticipated Technological Advances*, 10 J. MARSHALL REV. INTELL. PROP. L. 154, 172–77 (2010); Jared Vasconcellos Grubow, *O.K. Computer: The Devolution of Human Creativity and Granting Musical Copyrights to Artificially Intelligent Joint Authors*, 40 CARDOZO L. REV. 387, 388–89 (2018).

⁷ As clarification, in this paper the term “AI” refers to the artificially intelligent computer or computer program, not just the artificial intelligence feature of the program. An artificially intelligent computer program can be best defined as a computer program which is created to be an autonomous system that is “capable of learning without being specifically programmed by a human. . . . [It] has a built-in algorithm that allows it to learn from data input, and to evolve and make future decisions that may be either directed or independent.” Andres Guadamuz, *Artificial Intelligence and Copyright*, WIPO MAGAZINE (Oct. 2017), https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html; see also Williams, *supra* note 2 (“At its most simple, AI is technology that can operate and think for itself without traditional human intervention.”).

⁸ Copyright Act of 1976, 17 U.S.C. § 101 (2020).

⁹ See, e.g., Brown, *supra* note 6 at 20–22 (arguing that “certainty of copyright in computer-generated works could provide valuable incentives for the creators of the machines that generate those works. The algorithms do not need the incentive to create works, but the programmers need the incentive to write the algorithms” upon which the AI is based).

¹⁰ See *id.* at 24–27; see also Schломit Yanksky-Ravid, & Luis Antonio Velez-Hernandez, *Copyrightability of Artworks Produced by Creative Robots and Originality: The Formality-Objective Model*, 19 MINN. J.L. SCI. & TECH. 1, 1–2 (2018).

¹¹ See, e.g., Brown, *supra* note 6 at 24–27; see also Bridy, *supra* note 6; Vasconcellos Grubow, *supra* note 6 at 408–411.

¹² See, e.g., *supra* note 6; see also James Grimmelman, *There's No Such Thing as a Computer-Authored Work—And It's a Good Thing, Too*, 39 COLUM. J.L. & ARTS 403 (2016).

¹³ See *infra* Sections II and III. Since an AI has no money and cannot open a bank account or otherwise accumulate wealth, then damages are meaningless. Even an injunction would be almost impossible to enforce. See *infra* note 53 and accompanying text.

example, in *Authors Guild v. Google*,¹⁴ one of the infringing activities about which the plaintiff authors complained was the “ngrams” research tool, which helps users to identify linguistic and literary patterns across the vast Google Library.¹⁵ The Authors Guild sued Google, but the mechanism executing the allegedly infringing activity was Google’s AI.

In this action, this was an easy call; Google’s corporate name fronts all its various features, and it undoubtedly controls and benefits from its AI functions. But this will not always be the case. As Microsoft is not liable for the infringements penned by those who use Microsoft Word to write them, there may come a time when an AI architect is not liable for infringements created independently by its AI.

AI infringement liability considers issues from the theoretical, like due process and remedies, to the practical, such as legal representation and discovery. Scholars have previously looked to substantive issues from general torts committed by robots,¹⁶ to the copyright issues arising from inputting copyrighted material for the purpose of machine learning,¹⁷ to whether AIs can meet the creative, originality or other statutory requirements to be authors.¹⁸ Our research focuses instead on other considerations that determine whether an AI can be the legal author under the Copyright Act: specifically, if it is procedurally possible for an AI to be a defendant in an infringement action with regards to personal jurisdiction and remedies.¹⁹

Several significant procedural problems would arise if an AI could be considered the author of a work under the Copyright Act.²⁰ This article first discusses issues surrounding AI as an infringing author, then AI as a plaintiff. We then summarize some of the problems if a guardianship system is used to represent the interests of the AI’s copyright rights. We conclude that, even

¹⁴ See *Authors Guild v. Google, Inc.*, 804 F.3d 202, 209 (2d Cir. 2015).

¹⁵ *Id.*

¹⁶ See Mark A. Lemley & Bryan Casey, *Remedies for Robots*, 86 U. CHI. L. REV. 1311 (2019) (discussing allocating responsibility when robots commit a tort resulting in physical harm or death, and the authors’ arguments regarding remedies the law can or should provide in such situations).

¹⁷ See, e.g., Benjamin L.W. Sobel, *Artificial Intelligence’s Fair Use Crisis*, 41 COLUM. J.L. & ARTS 45 (2017).

¹⁸ See, e.g., Daryl Lim, *AI & IP: Innovation & Creativity in an Age of Accelerated Change*, 52 AKRON L. REV. 813 (2018).

¹⁹ This article touches on two of the procedural and logistical issues that would have to be addressed if AIs are to be considered authors under the Copyright Act. There are several others, which are addressed in the longer version of this article, such as vicarious liability and contributory infringement by a human having control over the AI, subject matter jurisdiction, and others. In addition, the longer article also examines these issues from the position of the AI as the author/plaintiff.

²⁰ As noted *supra*, while some are addressed here, other issues are examined in more detail in a forthcoming article.

if an AI can satisfy the doctrinal arguments regarding authorship, there remain serious constraints with regard to liability of an AI copyright owner.²¹

II. JURISDICTION, SERVICE OF PROCESS, AND OTHER CIVIL PROCEDURE DILEMMAS

When a person infringes upon an author's copyright, the author has a cause of action against that creator of the infringing work. If the creator of an infringing work is an AI, it stands to reason that the copyright holder has a cause of action against the AI.²² However, the cause of action is meaningless if the plaintiff copyright owner does not—or cannot—enforce it by suing the infringer. Apart from the substantive questions of copyright law that are implicated (or not) by AI activities, several procedural issues may make a lawsuit against an AI infringer challenging.

A reasonable place to start our examination of civil procedure issues is with the difficulties in establishing personal jurisdiction.²³ Personal jurisdiction is “a court’s power to bring a person into its adjudicative process,” or “jurisdiction over a defendant’s personal rights.”²⁴ It is long settled that personal jurisdiction extends to non-person defendants as well in the form of corporations.²⁵

The jurisdictional challenge that the AI defendant presents is, of course, that it is not a person, but the closest non-person analogy is imperfect. The AI could not file articles of incorporation without a human being named as

²¹ This would also apply to *Naruto*, the crested macaque. *Cf. Naruto v. Slater*, 888 F.3d 418 (9th Cir. 2018).

²² We understand that an easy solution would be to sue the creator of the AI, and not the AI itself. However, this would be equivalent of suing Microsoft for works composed in Word or Smith-Corona for works composed on a typewriter. *Cf. Lieberman, supra* note 6, at 171 (noting that “a law professor may own the same computer for several years, yet what is created on it... does not have the creation date of the day the professor bought the computer, or the day the computer was built. A writing has the creation date and is copyrightable as of the day it was actually created and achieved fixation.”); *Lim, supra* note 18, at 846 (“The author and owner of [a] work will be the same as a work created on Word or PowerPoint—the one who created it, not Microsoft. . .”).

²³ Civil procedure issues implicated in a copyright infringement lawsuit would necessarily be federal in nature, as copyright infringement is exclusively within the jurisdiction of federal courts. *See* U.S. CONST. art. I, § 8, cl. 8; 28 U.S.C. § 1338 (2019). Personal jurisdiction in federal courts is determined on a state-by-state basis. *See* FED. R. CIV. P. 4(k) (“Serving a summons or filing a waiver of service establishes personal jurisdiction over a defendant who is subject to the jurisdiction of a court of general jurisdiction in the state where the district court is located; [or] if... exercising jurisdiction is consistent with the United States Constitution and laws.”).

²⁴ *Jurisdiction*, BLACK’S LAW DICTIONARY (11th ed. 2019).

²⁵ *See, e.g., Louisville, C. & C.R. Co. v. Letson*, 43 U.S. 497, 558 (1844) (“[A] corporation created by and doing business in a particular state, is to be deemed to all intents and purposes as a person . . . capable of being treated as a citizen of that state . . . for all the purposes of suing and being sued.”).

the incorporator²⁶ or officers of the corporation.²⁷ Even if another corporation is listed as the owner, the chain of ownership must eventually lead back to a human owner.²⁸ Thus, for purposes of civil procedure and how it is treated as a defendant, an AI would have to be considered a person and not a corporation.²⁹

Establishing personal jurisdiction over AI as a defendant also requires a determination of whether we deem AI to be a “property.” There are three basic types of personal jurisdiction: *in personam*, *in rem*, and *quasi in rem*.³⁰ Deeming AI to be property allows courts to exercise jurisdiction *in rem*, determining the rights and liabilities of the world with respect to that property.³¹ However, a copyright infringement case does not act like a pure

²⁶ See, e.g., MO. REV. STAT. § 351.050 (2004) (“One or more natural persons of the age of eighteen years, or more, may act as an incorporator of such corporation by signing and delivering in the office of the secretary of state the articles of incorporation of such corporation.”) (emphasis added).

²⁷ See, e.g., MO. REV. STAT. § 351.046 (2004).

Filing requirements.

6. The document shall be executed:

- (1) By the chairman of the board of directors of a domestic or foreign corporation, by its president, or by another of its officers;
- (2) If directors have not been selected or the corporation has not been formed, by the incorporator(s); or
- (3) If the corporation is in the hands of a receiver, trustee, or other court-appointed fiduciary, by that fiduciary.

7. The person executing the document shall sign it and state beneath or opposite his signature his name and the capacity in which he signs. The document may contain the corporate seal, an attestation by the secretary or an assistant secretary, an acknowledgment, verification or proof.
11. A statement or document filed under this chapter represents that the person signing the document or statement believes the statements are true and correct to the best of such person’s knowledge and belief, subject to the penalties provided under section 575.040.

²⁸ See, e.g., MO. REV. STAT. § 351.015(13) (2007) (“‘Person’ includes, without limitation, an individual, a foreign or domestic corporation whether not for profit or for profit, a partnership, a limited liability company, an unincorporated society or association, two or more persons having a joint or common interest, or any other entity.”).

²⁹ Since an AI is considered an entity and not a business, then long arm statutes and case law would likely not be an issue and is thus not discussed in this article.

³⁰ See *Hanson v. Denckla*, 357 U.S. 235, 246 (1958) (“[T]he courts of a state may not enter a judgment imposing obligations on persons (jurisdiction *in personam*) or affecting interests in property (jurisdiction *in rem* or *quasi in rem*.”); see also *Int’l Shoe Co. v. Wash.*, 326 U.S. 310 (1945).

³¹ *Pennoyer v. Neff*, 95 U.S. 714, 727 (1877).

Substituted service by publication, or in any other authorized form, may be sufficient to inform parties of the object of proceedings taken where property is once brought under the control of the court by seizure or some equivalent act. The law assumes that property is always in the possession of its owner, in person or by agent; and it proceeds upon the theory that its seizure will inform him, not only that it is taken into the custody of the court, but that he must look to any proceedings authorized by law upon such seizure for its condemnation and sale. Such service may also be sufficient in cases where the object of the action is to reach and dispose of property in the State, or of some interest therein, by enforcing a contract or a lien respecting the same, or to partition it among

in rem action; at the end of the day, the plaintiff has no wish to determine rights over the AI, she merely wants to protect her authored work. A more suitable approach might be a *quasi in rem* approach, which allows a court in which the AI is located to attach the AI to the lawsuit, and still consider the liability particular to the copyright infringement action.³² However, because the remedy afforded the plaintiff in a *quasi in rem* action is limited to the value of the property attached—here, the AI—this may be a less attractive alternative for copyright plaintiffs, who in some instances may be entitled to statutory damages for infringement.³³

This leaves *in personam* jurisdiction, which determines the rights and liabilities of an individual defendant (as opposed to property).³⁴ *In personam* jurisdiction is dependent upon residence (general *in personam* jurisdiction) or the location of the cause of action (specific *in personam* jurisdiction). General *in personam* jurisdiction is determined by the domicile of the defendant,³⁵ which begs the question: Where does an AI reside? There is the possibility that the AI's program is stored on a remote server,³⁶ such as via Amazon Web Services.³⁷ Indeed, some of these servers store the same program remotely on different servers, to prevent the loss of one server from

different owners, or, when the public is a party, to condemn and appropriate it for a public purpose. In other words, such service may answer in all actions which are substantially proceedings *in rem*.

Id.

³² This approach is not without precedent. *See, e.g.,* Office Depot, Inc. v. Zuccarini, 596 F.3d 696, 703 (9th Cir. 2010) (exercising *quasi in rem* jurisdiction over a defendant judgment debtor where the registry of his domain names was located).

³³ 17 U.S.C. § 504(c)(1).

[T]he copyright owner may elect, at any time before final judgment is rendered, to recover, instead of actual damages and profits, an award of statutory damages for all infringements involved in the action, with respect to any one work, for which any one infringer is liable individually, or for which any two or more infringers are liable jointly and severally, in a sum of not less than \$750 or more than \$30,000 as the court considers just.

³⁴ *Int'l Shoe*, 326 U.S. at 316 (“Historically the jurisdiction of courts to render judgment *in personam* is grounded on their de facto power over the defendant’s person.”).

³⁵ As recently as 2014, the Supreme Court has held that the test for general *in personam* jurisdiction for corporations is essentially domicile. *Daimler AG v. Bauman*, 571 U.S. 117, 137 (2014). No similar holding has been made for individual defendants, except to say that the “paradigm” for general *in personam* jurisdiction for individual defendants is domicile. *See Goodyear Dunlop Tires Operations, S.A. v. Brown*, 564 U.S. 915, 924 (2011).

³⁶ Colloquially known as “the cloud” or “cloud computing,” Lexico.com, a collaborative effort of Dictionary.com and Oxford University Press defines cloud computing as “[t]he practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer.” *Cloud Computing*, LEXICO, https://www.lexico.com/en/definition/cloud_computing (last visited Oct. 15, 2019).

³⁷ AMAZON WEB SERVICES, <https://aws.amazon.com/> (last visited Sept. 30, 2019).

affecting the data stored on it.³⁸ It would have to be determined whether the location of the server is the location of the AI's residence, or if there is another location where the AI resides, sufficient to confer state citizenship upon it.³⁹

The final possibility is specific *in personam* jurisdiction, which would require a constitutional analysis to satisfy the minimum contacts analysis first introduced by *International Shoe*.⁴⁰ However, the Supreme Court in *J. McIntyre Machinery, Ltd. v. Nicaastro* established that it is insufficient for the defendant to place something into the "stream of commerce" and then be held accountable for its actions wherever it lands.⁴¹ Similarly, the AI likely has no reasonable anticipation of the scope of its work, and bringing a lawsuit against an AI wherever the injury occurs—though oftentimes preferable—could prove to be tricky.

The question of contact-based jurisdiction, of course, is avoided altogether if the plaintiff can have the defendant served in the forum state. This territorial jurisdiction is based on the defendant's presence within the forum state, and under Rule 4(k) is not subject to an additional contacts analysis.⁴² This also leads to another problem: that of service of process.⁴³ How would you serve an AI with a lawsuit? Under Rule 4(e) of the Federal Rules of Civil Procedure, a person may be served several ways: by following state law regarding service, by delivery to the individual personally; leaving a copy at the person's home with someone of suitable age and discretion who also resides there; or by delivering a copy to an agent or to someone authorized by law to receive service of process for the person.⁴⁴ Yet, as with

³⁸ Google Cloud, for example, has geo-redundancies in multi-regional locations, and gives its users the option to choose "a pair of specific GCP regions" for data storage. Geoffrey Noer & Ben Chong, *Store It, Analyze It, Back It Up: Cloud Storage Updates Bring New Replication Options*, GOOGLE CLOUD BLOG: STORAGE & DATA TRANSFER (Oct. 11, 2018), <https://cloud.google.com/blog/products/storage-data-transfer/store-it-analyze-it-back-it-up-cloud-storage-updates-bring-new-replication-options>.

³⁹ A related issue is that of venue. Under 28 U.S.C. § 1400(a), any action relating to copyrights may be instituted in which the defendant or its agent "resides or may be found." If domicile is problematic for general *in personam* jurisdiction, a similar problem will exist in determining residence for venue in the federal courts (which is required due to exclusive federal subject matter jurisdiction over copyright infringement suits. 28 U.S.C. § 1331).

⁴⁰ See generally *Int'l Shoe Co. v. Wash.*, 326 U.S. 310 (1945).

⁴¹ *J. McIntyre Mach., Ltd. v. Nicaastro*, 564 U.S. 873, 883 (2011).

⁴² See FED. R. CIV. P. 4(k), *supra* note 23; *Burnham v. Superior Court of Cal.*, 495 U.S. 604, 620–21 (1990) (rejecting attempt to modify the "traditional" basis of personal jurisdiction based on service on the defendant while the defendant is willingly present in the forum state).

⁴³ FED. R. CIV. P. 12(b)(4)–(5).

⁴⁴ Serving an Individual Within a Judicial District of the United States. Unless federal law provides otherwise, an individual—other than a minor, an incompetent person, or a person whose waiver has been filed—may be served in a judicial district of the United States by:

establishing personal jurisdiction, it may be difficult to determine where an AI resides. Perhaps the easiest way to solve this problem is to have service effectuated via Rule 4(e)(2)(C).⁴⁵ Federal Rules could establish that the Secretary of State is authorized to receive service of process for AIs that are considered domiciled in the state, or a Guardian appointed for the AI could be the person authorized to receive service.⁴⁶ Currently, however, they do not.

If the server that hosts the AI program is located outside the United States, then Rule 4(f) would apply, extending service to individuals in foreign countries.⁴⁷ This has its own issues. For example, the country where the AI's computer program resides may not recognize AIs as entities that can be authors under their Copyright statute—or even capable of being sued.⁴⁸ If a

-
- (1) following state law for serving a summons in an action brought in courts of general jurisdiction in the state where the district court is located or where service is made; or
 - (2) doing any of the following: (A) delivering a copy of the summons and of the complaint to the individual personally; (B) leaving a copy of each at the individual's dwelling or usual place of abode with someone of suitable age and discretion who resides there; or (C) delivering a copy of each to an agent authorized by appointment or by law to receive service of process.

FED. R. CIV. P. 4(e).

⁴⁵ FED. R. CIV. P. 4(e)(2)(C) (A person may be served by “delivering a copy of each to an agent authorized by appointment or by law to receive service of process.”).

⁴⁶ There are various problems associated with using the Guardianship method to resolve issues of AIs as owners of copyrightable works, discussed in the forthcoming expanded article.

⁴⁷ This is under the assumption that the infringement is judiciable in the United States. For example, if the AI has published its work in the United States or in a country which is part of WIPO or another treaty that provides for relief by U.S. copyright owners. FED. R. CIV. P. 4(f) provides for:

Serving an Individual in a Foreign Country. Unless federal law provides otherwise, an individual—other than a minor, an incompetent person, or a person whose waiver has been filed—may be served at a place not within any judicial district of the United States:

- (1) by any internationally agreed means of service that is reasonably calculated to give notice, such as those authorized by the Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents;
- (2) if there is no internationally agreed means, or if an international agreement allows but does not specify other means, by a method that is reasonably calculated to give notice:
 - (A) as prescribed by the foreign country's law for service in that country in an action in its courts of general jurisdiction;
 - (B) as the foreign authority directs in response to a letter rogatory or letter of request; or
 - (C) unless prohibited by the foreign country's law by: (i) delivering a copy of the summons and of the complaint to the individual personally; or (ii) using any form of mail that the clerk addresses and sends to the individual and that requires a signed receipt; or
- (3) by other means not prohibited by international agreement, as the court orders.

⁴⁸ See Guadamuz, *supra* note 7 (“Most jurisdictions, including Spain and Germany, state that only works created by a human can be protected by copyright.”); see also World Intellectual Property Organization [WIPO], *Spain: 25628 LEY 22/1987, de 11 de noviembre de Propiedad Intelectual [25628 Law No. 22/1987 of November 11, 1987, on Intellectual Property]* (Mar. 17, 1987) <https://wipo.int/en/text/126598>:

country limits authorship under its copyright act to works created by humans directly, service may not be possible on a non-human entity; the other country may enact laws to prohibit service on an AI domiciled in that country, running directly afoul of Rule 4(f).⁴⁹

The procedural issues of personal jurisdiction and service of process lead to another inquiry: if the AI is the defendant potentially liable for an infringement—or anything—is it entitled to procedural due process rights under the U.S. Constitution at all? The Due Process Clause of the Fourteenth Amendment says that “[a]ll *persons born or naturalized* in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside...nor shall any State deprive any *person* of life, liberty, or property without due process of law.”⁵⁰ The Fifth Amendment similarly extends the concept of federal due process to persons.⁵¹ An AI is not a person “born” or “naturalized” within the United States. Of course, neither is a corporation, and courts have gone out of their way to extend due process protections to them. But, as noted above, an AI is not a corporation and makes even fewer individualized decisions (initially) than a corporation does. Affording an AI defendant any due process rights would require the courts to create another legal fiction extending personhood to AI.

III. WHAT REMEDIES, IF ANY ARE AVAILABLE AGAINST AN AI?

Even if one can successfully find an AI liable for copyright infringement, there may not be any possible remedies that could be enforced against an AI. Without possible remedies, an AI’s attorney could win any infringement suit by a mere Rule 12(b)(6) motion to dismiss for failure to state a claim upon which relief may be granted.

... los derechos que corresponden al autor, que es quien realiza la tarea puramente humana y personal de creación de la obra y que, por lo mismo, constituyen el núcleo esencial del objeto de la presente Ley y, por otra, los derechos reconocidos a determinadas personas físicas o jurídicas cuya intervención resulta indispensable para la interpretación o ejecución o para la difusión de las obras creadas por los autores. [... the rights corresponding to the author are determined, which is the one who performs the purely human and personal task of creating the work and which, therefore, constitute the essential core of the object of this Law and, on the other, the rights recognized by certain natural or legal persons whose intervention is essential for the interpretation or execution or for the dissemination of the works created by the authors.]

⁴⁹ In fact, if U.S. laws do enable AI to be an author, and therefore able to be sued, then it could be in another country’s business interests to prohibit these lawsuits.

⁵⁰ U.S. CONST. amend. XIV, § 1 (emphasis added).

⁵¹ U.S. CONST. amend. V (“No *person*... shall be deprived of life, liberty, or property, without due process of law. . . .”) (emphasis added).

Remedies in copyright infringement cases typically take three forms: actual damages, to compensate the infringed author for monetary losses due to the infringement; statutory damages; and injunctive relief.

A. *Actual Damages*

A copyright owner “is entitled to recover the actual damages suffered by him or her as a result of the infringement.”⁵² Presumably (and based on current technology), an AI does not have money, cannot open a bank account,⁵³ or otherwise accumulate wealth. Without a source of funds, damages are meaningless. As a result, there would be no money from which a successful plaintiff copyright owner could recover. This is, of course, assuming that the infringing activity itself would generate no money. The Copyright Act points out that infringers do make profits from the infringement,⁵⁴ and there is no reason that that profit-making activity could not be extended to AI, even if the AI itself is not receiving any of the proceeds from its creative endeavors.

⁵² See 17 U.S.C. § 504(b) (2010).

⁵³ According to the Federal Deposit Insurance Corporation regulations, 31 C.F.R. § 1020.220(a)(2) (2020), Customer Identification Programs for banks, savings associations, credit unions, and certain non-Federally regulated banks must collect the following information from a new customer under the Customer Identification Program:

(i) Customer information required—(A) the bank must obtain, at a minimum, the following information from the customer prior to opening an account:

- (1) Name;
- (2) Date of birth, for an individual;
- (3) Address, which shall be: (i) For an individual, a residential or business street address; (ii) For an individual who does not have a residential or business street address, an Army Post Office (APO) or Fleet Post Office (FPO) box number, or the residential or business street address of next of kin or of another contact individual; or (iii) For a person other than an individual (such as a corporation, partnership, or trust), a principal place of business, local office, or other physical location; and
- (4) Identification number, which shall be: (i) For a U.S. person, a taxpayer identification number; or (ii) For a non-U.S. person, one or more of the following: A taxpayer identification number; passport number and country of issuance; alien identification card number; or number and country of issuance of any other government-issued document evidencing nationality or residence and bearing a photograph or similar safeguard.

An AI would not be able to satisfactorily provide much of the required information.

⁵⁴ See 17 U.S.C. § 504(b) (2010) (“In establishing the infringer’s profits, the copyright owner is required to present proof only of the infringer’s gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work.”).

B. Statutory Damages

Instead of actual damages, a copyright owner may elect to recover statutory damages for all infringements involved in the action.⁵⁵ Statutory damages are available in an amount from \$750 to \$30,000.⁵⁶ If the copyright owner proves that the infringement was willful, then the court may increase statutory damages to \$150,000 per infringement.⁵⁷

If the recovery of actual damages against an AI defendant by an author plaintiff was problematic, the recovery of statutory damages may be impossible. Opting for statutory damages suggests that the AI defendant may not have reaped profits from the infringing activity itself. If that's the case, then the question of actual money to satisfy the statutory damages returns. Moreover, even if the author plaintiff is able to prove willful infringement against an AI defendant, the problem of extra funds that are not allocated to profits or damages remains.⁵⁸

C. Injunctions

Professors Lemley and Casey have discussed, generally, remedies for robots with regard to injunctions.⁵⁹ While an AI does not have the mobility associated with the tort-committing robot contemplated in their article,⁶⁰ their arguments can still apply with regard to copyright infringement. While no physical harm results from copyright infringement, it is considered a tort of strict liability.⁶¹ The authors note that while it may seem that enforcing an injunction against a robot would be simpler than against a person or corporation, it is fraught with problems. A robot would be unable to use

⁵⁵ *See id.* § 504(c)(1).

⁵⁶ *See id.*

⁵⁷ *See id.* § 504(c)(2).

⁵⁸ Moreover, the question of statutory damages may be a dicey one for an author plaintiff to undertake. In the case “that such infringer was not aware and had no reason to believe that [its] acts constituted an infringement of copyright, the court in its discretion may reduce [an] award of statutory damages to a sum of not less than \$200.” *See id.*

⁵⁹ Lemley & Casey, *supra* note 16, at 1370–78.

⁶⁰ *Id.* at 1327 (discussing the technological advancements “that have allowed for the introduction of high-stake robotics systems including self-driving cars, medical diagnostic robots, and even experimental autonomous drones. Yet, even the most performant of these systems remains imperfect . . . [a]ccepting imperfection also means accepting the possibility that robotics systems will sometimes cause harm to others.”).

⁶¹ *EMI Christian Music Grp., Inc. v. MP3tunes, LLC*, 844 F.3d 79, 89 (2d Cir. 2016) (“Copyright infringement is a strict liability offense in the sense that a plaintiff is not required to prove unlawful intent or culpability.”).

common sense when circumstances change and make allowances for when there is sufficient justification for departing from the injunction.⁶²

To issue an effective injunction that causes a robot to do what we want it to do (and nothing else) requires both extreme foresight and extreme precision in drafting it. If injunctions are to work at all, courts will have to spend a lot more time thinking about exactly what they want to happen and all the possible circumstances that could arise. If past experience is any indication, courts are unlikely to do it very well. That's not a knock on the courts. Rather, the problem is two-fold: words are notoriously bad at conveying our intended meaning, and people are notoriously bad at predicting the future. Coders, for their part, aren't known for their deep understanding of the law, and so we should expect errors in translation even if the injunction is flawlessly written. And if we fall into any of these traps, the consequences of drafting the injunction incompletely may be quite severe.⁶³

Analogizing this to an injunction for a copyright infringement claim, a court order enjoining an infringing activity would have to take into account Fair Use,⁶⁴ which could be an insurmountable obstacle, considering the nature and difficulty in determining whether an alleged infringer's use is fair use.

Lemley and Casey also point out that an AI can simply ignore an injunction with impunity.⁶⁵ An AI which refuses to obey an injunction or otherwise stop infringing on a copyright faces no consequences—it has no money from which a contempt citation fine can be levied, and it cannot be jailed. Destruction of the non-compliant infringing AI seems extreme.⁶⁶

⁶² Lemley & Casey, *supra* note 16, at 1371 (discussing the problems with enjoining robots and noting that machines “operate according to their instructions—no more, no less”).

⁶³ *Id.* at 1373.

⁶⁴ 17 U.S.C. § 107 (2019).

[T]he fair use of a copyrighted work, including such use by reproduction in copies or phonorecords . . . for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include— (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.

⁶⁵ Lemley & Casey, *supra* note 16, at 1374.

⁶⁶ *Id.* at 1374–75.

D. Consequences of an Uncollectable Remedy

In a complaint in federal court, the plaintiff must plead three things: a short and plain statement of the grounds of the federal court's jurisdiction; a short and plain statement of the claim; and the relief sought.⁶⁷ In a copyright infringement claim against an AI defendant, the first requirement would not be problematic. As mentioned above, subject matter jurisdiction for copyright infringement claims is exclusive in the federal courts.⁶⁸

The problem may lie in the plaintiff's ability to make a short and plain statement of the relief sought. The danger for the author plaintiff against an AI defendant is the possibility that there would not be an adequate claim for relief. Without an adequate remedy at law, the legal representative of an AI could win a motion to dismiss pursuant to Rule 12(b)(6) motion for failure to state a claim upon which relief may be granted,⁶⁹ and if a defendant is determined to be judgment-proof, a plaintiff runs the risk of dismissal.⁷⁰ Even without the concern about the action's survival in litigation, the inherent problem in suing an AI is whether it is a fiscally responsible decision to file a lawsuit in the first place when the plaintiff knows the likelihood of recovery is remote. Moreover, as an author's rights in a copyrighted work do not statutorily diminish if the author fails to bring a lawsuit against the infringer,⁷¹ *not* suing becomes a more attractive option, though issues such as laches⁷² and estoppel⁷³ could arise.

⁶⁷ See FED. R. CIV. P. 8(a).

⁶⁸ See *supra* note 39; 28 U.S.C. § 1338 (2019).

⁶⁹ See FED. R. CIV. P. 12(b)(6). However, just because a litigant cannot recover would not necessarily render the complaint baseless; not all relief for copyright infringement is monetary.

⁷⁰ See 28 U.S.C. § 1915(e)(2)(B)(iii) (2019) (“[T]he court shall dismiss the case at any time if the court determines that . . . the action . . . seeks monetary relief against a defendant who is immune from such relief.”).

⁷¹ In contrast, under the Lanham Act, a trademark owner who fails to police their mark can be adjudicated as having abandoned the mark through “naked licensing.” See *Dawn Donut Co. v. Hart’s Food Stores, Inc.*, 267 F.2d 358, 366 (2d Cir. 1959) (“[T]he Lanham Act places an affirmative duty upon a licensor of a registered trademark to take reasonable measures to detect and prevent misleading uses of his mark by his licensees or suffer cancellation of his federal registration.”).

⁷² See, e.g., *Haas v. Leo Feist, Inc.*, 234 F. 105, 108 (S.D.N.Y. 1916) (“It must be obvious to every one familiar with equitable principles that it is inequitable for the owner of a copyright, with full notice of an intended infringement, to stand inactive while the proposed infringer spends large sums of money in its exploitation, and to intervene only when his speculation has proved a success. Delay under such circumstances allows the owner to speculate without risk with the other’s money; he cannot possibly lose, and he may win.”).

⁷³ See, e.g., *Carson v. Dynegy, Inc.*, 344 F.3d 446, 453 (5th Cir. 2003) (“[A] copyright defendant must prove four conjunctive elements to establish estoppel in such cases: (1) the plaintiff must know the facts of the defendant’s infringing conduct; (2) the plaintiff must intend that its conduct shall be acted on

IV. CONCLUSION

This morass of legal headaches goes beyond any doctrinal issues regarding authorship and provides ample reason to keep legal authorship in the hands of humans or entities controlled by humans. Without adequate remedies in equity or at law by which an AI can be sued for infringement, or adequate remedies to provide an AI author when its work has been infringed, it is meaningless to allow an AI to be considered an author within the meaning of the Copyright Act.⁷⁴

or must so act that the defendant has a right to believe that it is so intended; (3) the defendant must be ignorant of the true facts; and (4) the defendant must rely on the plaintiff's conduct to its injury.”)

⁷⁴ Liebesman, *supra* note 6, at 176 (“Until an AI is considered sentient enough to be able to negotiate licensing rights and have constitutional standing to file infringement suits, it is difficult to find an option which would confer rights in the work to a human person . . .”).